

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): Apparatus for igniting a fuel/air mixture in a combustion chamber of a combustion engine with at least one light source, an optical transmission apparatus and a coupling optic for focusing light into said combustion chamber, ~~characterized in that~~ wherein at least one master light source is provided for the constant emission of untriggered, themselves non-flammable master light pulses and ~~that~~ wherein said transmission apparatus includes at least one amplifier which is selectively triggerable and amplifies individual or groups of master light pulses to an energy level which is sufficient to ignite said fuel/air mixture.

Claim 2 (currently amended): Apparatus according to claim 1, ~~characterized in that~~ wherein said master light source is provided for the constant periodic emission of untriggered, themselves non-flammable master light pulses.

Claim 3 (currently amended): Apparatus according to claim 1, ~~characterized in that~~ wherein said combustion engine is a stationary gas engine.

Claim 4 (currently amended): Apparatus according to claim 1, ~~characterized in that~~ wherein said master light source is a laser.

Claim 5 (currently amended): Apparatus according to claim 4, ~~characterized in that~~
wherein said laser is a solid-state laser.

Claim 6 (currently amended): Apparatus according to claim 5, ~~characterized in that~~
wherein said solid-state laser is diode-pumped or passively Q-switched or actively Q-switched.

Claim 7 (currently amended): Apparatus according to claim 5, ~~characterized in that~~
wherein said solid-state laser is a Yb laser or Nd laser.

Claim 8 (currently amended): Apparatus according to claim 7, ~~characterized in that~~
wherein said Nd laser is an Nd laser with Cr^{4+} saturable absorber.

Claim 9 (currently amended): Apparatus according to claim 1, ~~characterized in that~~
wherein said master light source emits light pulses or laser pulses with a repetition frequency of 1 to 25 kHz.

Claim 10 (currently amended): Apparatus according to claim 9, ~~characterized in that~~
wherein said repetition frequency is 5 kHz.

Claim 11 (currently amended): Apparatus according to claim 1, ~~characterized in that~~
wherein said master light source emits light pulses or laser pulses with a pulse duration of 1 ns to 500 ns.

Claim 12 (currently amended): Apparatus according to claim 1, ~~characterized in that~~
wherein said master light source emits light pulses or laser pulses with a pulse duration
of 100 ns to 300 ns.

Claim 13 (currently amended): Apparatus according to claim 1, ~~characterized in that~~
wherein the wavelength of said light used is between 0.5 μm and 20 μm .

Claim 14 (currently amended): Apparatus according to claim 1, ~~characterized in that~~
wherein the wavelength of said light used is between 0.5 μm and 5 μm .

Claim 15 (currently amended): Apparatus according to claim 1, ~~characterized in that~~
wherein at least one amplifier of said transmission apparatus includes at least one light-
amplifying light guide or at least one monolithic rod or at least one light-amplifying
crystal wafer.

Claim 16 (currently amended): Apparatus according to claim 15, ~~characterized in that~~
wherein said light guide or said monolithic rod or said crystal wafer is laser active.

Claim 17 (currently amended): Apparatus according to claim 15 ~~characterized in that~~
wherein said light guide is a flexible optical fibre.

Claim 18 (currently amended): Apparatus according to claim 15, ~~characterized in that~~ wherein said amplifier amplifies the energy level of said light or laser pulses to 0.5 mJ to 10 mJ.

Claim 19 (currently amended): Apparatus according to claim 15, ~~characterized in that~~ wherein said amplifier amplifies the energy level of said light or laser pulses to 1 mJ to 5 mJ.

Claim 20 (currently amended): Apparatus according to claim 15, ~~characterized in that,~~ wherein in the case of a light-amplifying or laser-active optical fibre, this has a section that is wound up.

Claim 21 (currently amended): Apparatus according to claim 20, ~~characterized in that~~ wherein said optical fibre has a section wound up in a coil shape.

Claim 22 (currently amended): Apparatus according to claim 15, ~~characterized in that~~ wherein at least one triggerable pump light source acting on at least one light-amplifying light guide or at least one light-amplifying monolithic rod or at least one light-amplifying crystal wafer is provided.

Claim 23 (currently amended): Apparatus according to claim 22, ~~characterized in that~~ wherein said light guide or said monolithic rod or said crystal wafer is laser active.

Claim 24 (currently amended): Apparatus according to claim 1, ~~characterized in that~~
wherein said pump light source is a semiconductor laser.

Claim 25 (currently amended): Apparatus for a multi-cylinder combustion engine
according to claim 1, ~~characterized in that~~ wherein for several cylinders, only one
common master light source is provided in each case and said optical transmission
apparatus has one or more branches in order to distribute said master light to cylinder-
selective, triggerable amplifiers.